[4910-13] October 15, 1997

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR part 91

[Docket No. ; Notice No. 97-]

RIN 2120-

Flight plan requirements for helicopter operations under Instrument Flight Rules

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Proposed Rulemaking (NPRM).

SUMMARY: The FAA proposes to amend the general operating rules pertaining to flight plan requirements for flight by helicopters under Instrument Flight Rules (IFR) by revising: (1) the destination airport criteria for requiring an alternate airport to be identified on an IFR flight plan, and (2) the weather minimums necessary to designate an airport as an alternate on an IFR flight plan. This proposed rule is needed because current rules discourage helicopter operations under instrument flight rules in marginal weather conditions. This proposed rule would increase safety by allowing helicopter operators access into the IFR system commensurate with the unique flight characteristics of helicopters.

DATE: Comments must be received on or before **[Insert date 120 days after date of publication in the Federal Register]**.

ADDRESS: Send or deliver comments on this notice in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-10), Room 915G, Docket No. , 800 Independence Avenue, SW, Washington, DC 20591. Comments may also be submitted to the Rules Docket by using the following Internet address: nprmcmts@mail.hq.faa.gov. Comments must be marked Docket No. . Comments may be examined in the Rules Docket in Room 915G on weekdays between 8:30 a.m. and 5:00 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: William H. Wallace, General Aviation Branch (AFS-804) Flight Standards Service, Room ___ Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3771.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in this rulemaking by submitting written data, views, or arguments, and by commenting on the possible environmental, economic, and federalism-or energy-related impact of the adoption of this

proposal. Comments concerning the proposed implementation and effective date of the rule are also specifically requested.

Comments should carry the regulatory docket or notice number and should be submitted in triplicate to the Rules Docket address specified above. All comments received and a report summarizing any substantive public contact with FAA personnel on this rulemaking will be filed in the docket. The docket is available for public inspection both before and after the closing date for receiving comments.

Before taking any final action on this proposal, the Administrator will consider the comments made on or before the closing date for comments, and the proposal may be changed in light of the comments received.

The FAA will acknowledge receipt of a comment if the commenter includes a self-addressed, stamped postcard with the comment. The postcard should be marked "Comments to Docket No. _____." When the comment is received by the FAA, the postcard will be dated, time stamped, and returned to the commenter.

Availability of the NPRM

An electronic copy of this document may be downloaded using a modem and suitable communications software from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703-321-3339) or the Federal Register's electronic bulletin board service (telephone: 202-512-1661).

Internet users may reach the FAA's web page at http://www.faa.gov or the Federal Register's webpage at http://www.access.gpo.gov/su_docs for access to recently published rulemaking documents.

Any person may obtain a copy of this NPRM by mail by submitting a request to the Federal Aviation Administration, Office of Rulemaking, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-9677. Communications must identify the notice number of this NPRM.

Persons interested in being placed on the mailing list for future NPRM's should request from the FAA's Office of Rulemaking a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, that describes the application procedure.

Current Helicopter Instrument Flight Rules

14 CFR § 91.169 requires that, unless otherwise authorized by air traffic control (ATC), each person filing an instrument flight rules (IFR) flight plan must include, among other things, an alternate airport designation unless the exceptions in § 91.169(b) are met; these exceptions specify that a person need not designate an alternate airport on an IFR flight plan if 14 CFR part 97 prescribes a standard instrument approach procedure for the first airport of intended landing and, for at least 1 hour before and 1 hour after the estimated time of arrival at that airport, weather reports or forecasts indicate that the ceiling will be 2,000 feet above the airport elevation and the visibility will be at least 3 miles.

In addition, § 91.169(c) states that unless otherwise authorized by the Administrator, no person may include an alternate airport in an IFR flight plan unless current weather forecasts indicate that at the estimated time of arrival at the alternate airport the ceiling and visibility will be at or above the following weather minimums: at airports for which an instrument approach procedure has been published in part 97, the alternate minimums specified in that procedure; or, if none are specified, for precision approach procedures, a

ceiling of 600 feet and visibility of 2 statute miles; for nonprecision approach procedures, a ceiling of 800 feet and visibility of 2 statute miles.

In addition, to operate under IFR, a person operating a civil aircraft must comply with the IFR fuel requirements of § 91.167. Section 91.167 requires that the aircraft must carry enough fuel (considering weather reports and forecasts and weather conditions) to: (1) complete the flight to the intended airport, (2) fly from that airport to an alternate airport, and (3) fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.

Section 91.167(b) specifies that the requirement to have sufficient fuel to fly to an alternate airport does not apply if 14 CFR part 97 prescribes a standard instrument approach procedure for the first airport of intended landing and, for at least 1 hour before and 1 hour after the estimated time of arrival at that airport, weather reports or forecasts indicate that the ceiling will be 2,000 feet above the airport elevation and the visibility will be at least 3 miles.

A person who cannot comply with §§ 91.169 and 91.167 may not file an IFR flight plan and may fly only under visual flight rules (VFR).

Helicopter Visual Flight Rules

In contrast to IFR flight minima, VFR flight is permitted in Class C and D airspace, and in Class E airspace below 10,000 feet MSL, as long as the helicopter can remain 500 below clouds, yet at a safe altitude for flight. 14 CFR §§ 91.119(d), 91.155(a) In Class B airspace, and in Class G airspace during daylight, the requirement is merely to remain clear of clouds. 14 CFR § 91.155(a). VFR flight is permitted in Class G airspace when the daytime flight visibility is one statute mile. VFR flight is permitted in Class B, C, and D airspace, and in Class E airspace below 10,000 feet MSL, when flight visibility is three statute miles. 14 CFR § 91.155(a). "Special VFR" allows VFR operation under even lower weather conditions. 14 CFR § 91.157,

As a result, it is legally permissible to operate a helicopter under visual flight rules in weather conditions under which the alternate airport flight plan filing requirements of §§ 91.169 and 91.167 prohibit the helicopter pilot from filing an IFR flight plan, preventing the helicopter from entering the IFR system.

This situation is frequently encountered in fact. Often, IFR equipped and certified helicopters are safely flown by IFR-rated pilots under visual flight rules in weather that

might be characterized as marginal VFR. Although such operations are both safe and legal, in these conditions, the FAA would prefer to make the benefits of IFR operation available to these helicopters, and many helicopter pilots would prefer to have the advantages of IFR operation.

Safety Benefits of IFR Operation

Aircraft operating under IFR are part of the national IFR system, which includes the air traffic monitoring and control structure. This system assures that both pilots and air traffic controllers know where the aircraft is and can work together to avoid hazards and complete the flight safely. In addition, immediate assistance is available in the event of an emergency.

Accident data collected by the National Transportation Safety Board (NTSB) shows that weather related accidents occur far more frequently under VFR than IFR. Between 1986 and 1995, a total of 215 weather related helicopter accidents occurred during flights for which no flight plan had been filed, and an additional 69 accidents occurred during flights for which a VFR flight plan had been filed. The total of 284 VFR accidents resulted in 164 fatalities. During this same period, only 6 weather related accidents occurred during flights for which an IFR plan had been filed.

The NTSB data strongly suggest that helicopter flights conducted under IFR are far less likely to have weather related accidents than helicopter flights conducted under VFR flight plans or those conducted without a flight plan. Some of these accidents and fatalities might have been prevented if the regulations allowed greater flexibility for helicopters to be operated under IFR in marginal weather conditions.

In 1988 the NTSB published a report, "Commercial Emergency Medical Service Helicopter Operations," that was initiated because the accident rate for these operations was twice the rate experienced by part 135 on-demand helicopter operations and one and one-half times the rate for all turbine-powered helicopters. The NTSB determined that marginal weather and inadvertent flight into IMC were the most serious hazards that VFR helicopters encounter. The report states:

> The Board believes that although the IFR system is not designed optimally for IFR helicopters and that the nature of the EMS helicopter mission further complicates this problem, the safety advantages offered by IFR helicopters flown by current and proficient pilots are great enough that EMS programs should seriously consider obtaining this capability.

Anticipated Secondary Benefits

In addition to the safety benefits discussed above, this proposed rulemaking is expected to result in certain

environmental and economic benefits. Environmental benefits result because IFR flights generally are conducted at higher altitudes and therefore create less overflight sound apparent on the ground than VFR helicopter flights in marginal weather conditions. Allowing more operations to be conducted under IFR will reduce helicopter overflight sound on the ground. Similarly, enhancing helicopter access to the IFR system is expected to result in increased utilization of existing IFR-certified and equipped helicopters, thereby yielding economic benefits in terms of greater returns on investment, and more efficient use of equipment, time and other resources. Economic costs and benefits are discussed below under the heading Regulatory Evaluation Summary.

The Unique IFR Flight Capabilities of Helicopters

The current IFR flight plan filing rules were issued to provide safe landing weather minimums in IFR conditions for airplanes operating under IFR. Apart from the distinction in § 91.167 concerning the amount of fuel a helicopter must carry versus the fuel an airplane must carry, flight planning requirements, including alternate airport weather minimums, are the same for airplanes and helicopters even though the operating characteristics of these aircraft are quite different.

Helicopters fly shorter distances at slower speeds than large airplanes, and generally remain in the air for shorter periods between landings. Therefore, a helicopter is less likely to fly into unanticipated, unknown or unforecast weather. The relatively short duration of the typical helicopter flight leg means that the departure weather and the helicopter's destination weather are likely to be within the same weather system.

The short flight time for helicopters also means that at the time of departure the weather forecast for the flight destination at the estimated arrival time (ETA) is likely to be more accurate than a forecast range of one hour before to one hour after ETA. It is not uncommon for a helicopter to take off and land at its destination within a weather station's hourly weather observation. The requirement of §§ 91.169 and 91.167 to consider destination forecasts for the two hour period around an ETA may require the helicopter pilot to consider forecasts that are less accurate than the hourly sequence report for the ETA itself.

FAA IFR Waivers

The FAA has several years of experience with reduced alternate airport weather minimums for helicopter flight planning purposes. During the 1970's, the FAA's New England

Region granted Certificates of Waiver or Authorization which authorized helicopter IFR flight plans using reduced alternate airport weather minimums. These waivers authorized flight plan filing weather minimums of 400 feet (ceiling) and 1 mile (visibility) when § 91.83(c) (predecessor of current § 91.169) provided minimums of 600 feet and 2 miles, and authorized minimums of 500 feet and 1 mile instead of 800 feet and 2 miles.

The FAA's operational experience with these waivers demonstrates that authorizing helicopter operators to file IFR flight plans using reduced alternate airport weather minimums results in a level of safety at least equivalent to that of the current rule, and offers greater operational flexibility for helicopter operators, consistent with the helicopter's inherently flexible operational capability.

History of this Rulemaking

Over the past 15 years, there have been specific recommendations from within the FAA, from industry, and from joint efforts of the agency and industry regarding regulatory changes for the purpose of safely expanding helicopter access to the IFR system. The FAA has been addressing these recommendations by working with industry to identify and,

where possible, grant relief from regulations which prevent safe helicopter operations in the IFR environment.

In 1984 the National Airspace Review (NAR) and in 1985 the Rotorcraft Regulatory Review (RRR) recommended reducing alternate airport minimums. With regard to former § 91.83, predecessor of current § 91.169, NAR Task Group 2-3.1 concluded that,

> current subsection (b) criteria, because of the maneuvering capabilities of helicopters, impose unnecessary restrictions on helicopter operators with regard to ceiling and visibility requirements at primary destination airports, thus necessitating the filing of alternate airports. Furthermore, because of the dearth of alternate airports within the normal flight distance of helicopters, alternate sites are often not available, thus preventing flight plan filing and conducting IFR operations. As a result, lower ceiling and visibility criteria were suggested for rotorcraft in subsection (b)(1) and (2) so as to reduce the frequency of required filing of alternate airports. The criteria ultimately settled upon, however, were those currently in use by the U.S. Army for requiring filing of alternate airports: ceiling 400 feet above the Height Above Airport (HAA) or Height Above Touchdown (HAT) as applicable to the approach (precision or non-precision) to be flown, and at least one-half of the prescribed horizontal visibility for that airport plus one mile (statute) (NAR 2-3.1.4). It was noted during discussions that this standard has been in use by the Army for at least a decade and that no mishaps among its large helicopter fleet have occurred as a direct result of these criteria.
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> The task group considered as well the weather minimums criteria for filing IFR alternate airports (subsection [c]). For the same reasons noted above, lowered ceiling and visibility values for rotorcraft were proposed.

See National Airspace Review, § 91.83, pp. 23-24 (DOT/FAA, August 14, 1984).

In an NPRM issued March 13, 1985, (50 FR 10157), the FAA proposed to amend § 91.23 (now § 91.167) to reduce the fuel reserve requirement for helicopters to 30 minutes from 45 minutes, the ceiling requirement for helicopters from 2,000 feet to 1,000 feet, and the visibility requirement for helicopters from 3 miles to 1 mile. No changes were proposed to § 91.83 (now § 91.169). The FAA stated in the preamble that the basis for the proposed reductions was that the helicopter has the unique ability to reduce airspeed safely on approach to as low as 40 knots, and is therefore provided reduced visibility minimums in part 97. The proposal went on to say that because the helicopter, with its reduced minimums, has a better probability of completing the flight to the planned destination it should be allowed a reduced fuel reserve. The FAA also stated that it had gained sufficient experience with operations under SFAR 29, "Limited IFR Operations of Rotorcraft," to conclude that reducing the

required fuel would not reduce the level of safety. SFAR 29 remains in effect today.

In the final rule of November 7, 1986, (51 FR 40692, 40707) the FAA amended § 91.23 to reduce the fuel reserve but withdrew the proposal to reduce ceiling and visibility minimums because a report, entitled "Weather Deterioration Models Applied to Alternate Airport Criteria," Report No. DOT/FAA/RD-81/92 (September 1981), had stated that "any reduction in alternate airport requirements should be offset by limiting the duration of the flight for which the reduced requirements apply." Id. at p.4-1. However, this was stated as a "preliminary conclusion," because, as the report explained, "The data developed during this study effort are based on the cumulative r^2 model of conditional probabilities. Since the model has not been validated for geographical and seasonal universality the results can only be considered as tentative. Consequently, the conclusions reached at the close of the study have been identified as being preliminary." The report also cautioned that, "Some data are presented for airports in several regions of the country. It should be cautioned that these data were obtained with an unvalidated model and although the results seem very reasonable and consistent, they should be considered only as examples of what

types of data the methodology can produce and not as actual study results." Id. at p.1-2. In the 16 years that have passed since this report was written, FAA's experience with reduced helicopter IFR flight plan filing criteria, developed under SFAR 29 and under the waivers discussed above, indicates that the preliminary concern for reduced helicopter ceiling and visibility minima for IFR flight plan filing purposes was over emphasized.

In August, 1993, a workshop conducted by the FAA with industry, called the Extremely Low Visibility Instrument Rotorcraft Approaches Workshop (ELVIRA), resulted in a list of "Ten Most Wanted" changes. See "Extremely Low Visibility IFR Rotorcraft Approach (ELVIRA) Operational Concept Development, Final Report," Report No. DOT/FAA/RD-94/1,I. (March 1994). The unprioritized list of 10 desired IFR system enhancements includes "Rotorcraft Specific Minima" for determining the need for and availability of alternate airports for flight plan filing purposes. Id. at p.3.

According to the ELVIRA report of December 1993, since rotorcraft are for the most part range limited, their destination airport and alternate airport will most likely be in the same air mass and consequently will have similar weather; current IFR restrictions force helicopter operators

to choose between flying in marginal VFR weather or not flying at all. In its ELVIRA Final report, the FAA noted that the current regulations result in a "severe penalty in the productivity of helicopters operating under IFR." Id. at p.34. The FAA observed that, "with certain weather conditions it is often impossible for the helicopter operator to gain access to the current IFR system, while VFR flight is allowed. . . . [C]hanging this [the alternate airport minimums] to 400-1 for a [helicopter] precision approach and 600-1 for a [helicopter] non-precision approach procedure, will enable many more [helicopter] IFR operations to take place while maintaining the same level of safety." Id. at pp. 34-35.

On February 23, 1995, Helicopter Association International (HAI) petitioned the FAA for an exemption from 14 CFR 91.169(c)(1)(i), which provides that alternate airport minimums for a precision approach are a ceiling of 600 feet and visibility of 2 statute miles. The petition asked the FAA to allow lower alternate airport weather minimums for IFR flight planning.

On April 24, 1996, HAI filed an amendment of its petition for exemption from 14 CFR 91.169(c)(1)(i), proposing, in part, to limit operations under the requested exemption to those

conducted by certain operators named in the amended petition. The stated purpose of this amendment was the further "accumulation of data to prove the operational safety of the use of such minimums." In addition, the FAA has received 13 other petitions requesting amendments to §§ 91.169 and 91.167 to allow helicopter operations with reduced alternate weather requirements.

The FAA's action on this NPRM responds to the purposes stated in HAI's petition and amended petition for exemption, and to the needs stated by other petitioners. With the publication of this NPRM, the FAA is closing the docket on HAI's petition for exemption, and on the petitions submitted by HAI and others for various amendments to 14 CFR §§ 91.169, 91.167 and related regulations.

The ARAC Working Group Recommendation

The Aviation Rulemaking Advisory Committee (ARAC) was established by the FAA to provide industry information and expertise during the rulemaking process. In October, 1991, the FAA assigned to the IFR Fuel Reserve Working Group of the ARAC General Aviation Operations Issues Group the task to "Evaluate the advantages and disadvantages of revising the fuel reserve requirements for flight under instrument flight rules. . . ." 56 FR 51744 (October 15, 1991).

Subsequently, the FAA assigned to the ARAC Helicopter Instrument Approach and Alternate Weather Minimum Working Group, the tasks to: (1) Evaluate the advantages and disadvantages of revised precision and non-precision instrument approach minima and alternate weather minima, considering the operational capability of the helicopter to decelerate before and during arrival at the Decision Height or Minimum Descent Altitude, to include circling approaches, and (2) Evaluate whether or not this capability reduces risk and the probability of a missed approach and the need to proceed to an alternate, and meet the resulting regulatory alternate fuel requirement.

The Helicopter Instrument Approach and Alternate Weather Minimum Working Group consisted of representatives from helicopter associations, helicopter manufacturers, helicopter pilot associations, helicopter operators, and government agencies. The working group met numerous times between January 1992 and October, 1997.

The proposed rule is based on the recommendation of the working group submitted to the FAA in November, 1997.

The Proposed Rule

In response to the needs discussed in this notice, the FAA proposes to amend the general operating rules pertaining

to flight plan requirements for flight by helicopters under Instrument Flight Rules by revising: (1) the destination airport criteria for requiring an alternate airport to be identified on an IFR flight plan, and (2) the weather minimums necessary to designate an airport as an alternate on an IFR flight plan.

The proposal reflects the differences in operational characteristics between airplanes and helicopters by maintaining the current requirements for airplanes while reducing the forecast ceiling and visibility minimums for helicopters. Thus, the proposed rule would revise § 91.169(b) so that an alternate airport designation would not be required on an IFR flight plan for helicopters using standard instrument approach procedures if weather reports or the prevailing weather forecast or a combination of them indicate that at the estimated time of arrival at the intended destination the ceiling will be at least 1,000 feet above the airport elevation or 400 feet above the lowest approach minima, whichever is higher, and the visibility will be at least 2 statute miles.

The proposed rule would also revise § 91.169(c) to reduce alternate airport weather minimums for helicopter flight plan filing purposes as follows: (1) for precision approach

procedures, a ceiling of 400 feet and visibility of 1 statute mile; (2) for non-precision approach procedures, a ceiling of 600 feet and visibility of 1 statute mile; and (3) if no instrument approach procedure has been published in part 97, the ceiling and visibility minimums allowing descent from the MEA, approach, and landing under basic VFR.

Under proposed § 91.167 (b), fuel requirements for an alternate airport would not apply to helicopters if weather reports or the prevailing weather forecast or a combination of them indicate that at the estimated time of arrival at the intended destination, the ceiling will be 1,000 feet above the airport elevation or 400 feet above the lowest approach minima and the visibility will be at least 2 statute miles.

This proposal is designed to enhance the safety of helicopter operations over that of VFR operation in marginal weather by facilitating entry of helicopters into the IFR system in a manner commensurate with their operational characteristics.

REGULATORY EVALUATION SUMMARY

Both the executive and legislative branches of government recognize that economic considerations are an important factor in establishing regulations. Executive Order 12866, signed by President Clinton on September 30, 1993, requires Federal

agencies to assess both the costs and benefits of proposed regulations and, recognizing that some costs and benefits are difficult to quantify, to propose or adopt regulations only upon a reasoned determination that the benefits of each regulation justify its costs. In addition, the Regulatory Flexibility Act of 1980 requires Federal agencies to determine whether proposed regulations are expected to have a significant economic impact on a substantial number of small entities, and, if so, to examine feasible regulatory alternatives to minimize the economic burden on small entities. Finally, the Office of Management and Budget directs agencies to assess the effects of proposed regulations on international trade.

Benefits

There are some non-quantifiable benefits that can be attributed to this proposed rulemaking, such as the reduction in the level of aircraft sound experienced by individuals on the ground when helicopters fly at higher altitudes. These benefits are difficult to measure accurately, and are discussed in qualitative terms. Other benefits are more quantifiable and are derived from the reduction in the number of fatal and serious accidents that occur in marginal weather

conditions. The estimated reduction in the number of accidents is due to the increased level of safety afforded pilots that fly IFR. These benefits are classified as quantitative.

A. Qualitative Benefits

Because of the lack of feasible alternatives to VFR, during periods of marginal or inclement weather conditions, a helicopter operator often will abandon his or her IFR flight plan and fly either VFR or Special VFR at lower altitudes. By flying at lower altitudes, third party costs (increased level of aircraft sound), are experienced by individuals on the ground.

Aircraft sound is a function, in part, of aircraft altitude, and sound energy can be reduced by increasing the flight altitude. Therefore, by providing the opportunity to increase the altitude of a helicopter flight in instrument meteorological conditions (IMC), the proposed rule would help to reduce the sound energy on the ground generated by that helicopter. For example, if a helicopter flying VFR at 250 ft above ground level (AGL) in weather conditions is able to fly IFR at 4,000 ft AGL in the same marginal weather conditions, the reduction in sound energy is 24 dB, which

represents a decrease to less than one-hundredth the level of sound intensity experienced by third parties on the ground.

Another benefit of this NPRM that is difficult to quantify is reducing the opportunity cost of idle resources. Opportunity cost is a forward-looking view of costs that are forgone by not putting a firm's resources to their highest uses. During periods of marginal or adverse weather conditions, many corporate helicopter flight operations are canceled rather than attempted under VFR. A portion of the opportunity cost can be measured by the lost productivity associated with the extra time involved by senior executives using alternate forms of transportation, such as automobiles. With the average annual chief executive compensation at $2.3 million, an hour delay could amount to as much as $1,100, plus the salaries of other senior executives traveling with the chief executive, plus the cost of the helicopter and pilot sitting idle. By enabling more helicopter pilots to operate under IFR in marginal weather conditions, these opportunity costs could be avoided.

B. Quantitative Benefits

The quantitative benefits of this proposed rulemaking are derived from a reduction in weather related accidents.

Weather related accidents are a common, serious type of accident experienced by helicopter operators, but the incidence of this type of accident can be reduced by enhanced helicopter access to the IFR system.

Data was compiled regarding helicopter accidents in which weather was a cause or factor over the 10 year period from 1986 to 1995. These data were obtained from the National Transportation Safety Board (NTSB) data base. The most recent accidents that occurred in 1996 are still under review and have not been placed into the NTSB data base. Because the data for 1996 is not complete, no data from 1996 are used in this analysis.

There were 215 helicopter accidents from 1986 to 1995 in which no flight plan was filed and weather was a cause or factor. That number of accidents is approximately 36 times greater than the six accidents that occurred under an IFR flight plan. In addition, 69 accidents occurred in which VFR flight plans were filed. This is approximately 12 times greater than the six accidents under IFR operation. When the 215 accidents are added to the 69 accidents, the result is a total of 284 accidents, which represents approximately 98 percent of all the accidents that occurred during the subject time interval in which weather was a cause or factor. These

statistics suggest the potential safety benefits of flying IFR in IMC.

When the fatalities sustained flying with no flight plan (95) are added to the fatalities sustained flying with a VFR flight plan (69), the result is 164 fatal injuries. That represents a fatality rate more than 5 times the 31 fatal injures sustained under an IFR flight plan. Similarly, when serious injuries sustained flying with no flight plan (34) are added to the serious injuries sustained flying with a VFR flight plan (27), the result is 61, compared to only one serious injury sustained in IFR flight.

In the aggregate, fatal and serious injuries that occurred when no IFR flight plan was filed are approximately 7 times those that occurred under an IFR flight plan. The FAA is aware that even though weather was a cause or contributing factor in all of these accidents, this proposed rulemaking would not have prevented all of these accidents or injuries; however, the data suggest IFR flight is safer than VFR flight when marginal weather conditions are present.

The FAA believes that 35 fatalities and injuries from 15 accidents could have been prevented if the proposed rule had been in effect. In addition to weather being a cause or contributing factor, all of the pilots involved in these

accidents had instrument ratings for helicopters, as well as airplanes. To determine the potential benefits that would result from this proposed rule, the FAA estimated the average costs associated with the accidents from VFR flight into IMC when the pilot in command was instrument rated for helicopters. A critical economic value of $2.7 million and $518,000 was applied to each human casualty and serious injury, respectively. This computation resulted in an estimate of approximately $62 million in casualty costs. Also, the value of the destroyed aircraft was estimated to be $8 million. If this rulemaking helps prevent the reoccurrence of these accidents, the expected potential safety benefits over the next ten years would be approximately $70 million ($49 million, discounted).

Costs

The proposed rule is not imposing any additional equipment, training, or other cost on the aviation industry. Therefore, the FAA believes there is no apparent compliance cost associated with the proposed rule. However, the FAA solicits comments regarding the extent and plausibility of the adverse impacts on operators that feel they would be impacted from implementation of the proposed rule.

Comparison of Costs and Benefits

The NPRM would not place any additional requirements on the aviation industry. Therefore, there is no compliance cost associated with the proposed rule. Qualitative benefits from the proposed rule would come from reducing the level of aircraft sound experienced by individuals on the ground and from cost savings associated with reducing transportation time. The quantitative benefits come from a reduction in accidents by enabling more helicopter pilots to operate under IFR in marginal weather conditions. Over the next 10 years, the estimated safety benefit of the proposed rule would be $70 million or $49 million, present value. Therefore, the FAA has determined that the proposed rule is cost beneficial.

Initial Regulatory Flexibility Assessment

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The RFA requires agencies to specifically review rules that may have a "significant economic impact on a substantial number of small entities."

This final rule will impact entities regulated by 14 CFR part 91. The FAA's criteria for "a substantial number" are a number which is not less that 11 and which is more than one-third the number of small entities subject to this rule. For all carriers, a small entity has been defined as one which owns, but does not necessarily operate, nine or fewer

aircraft. The FAA's criteria for "a significant impact" are as follows: At least $5,000 per year for an unscheduled air carrier, $70,800 per year for a scheduled carrier having only 60 or fewer passenger seats in it's aircraft fleet, and $126,600 per year for a scheduled carrier having 61 or more passenger seats in it's aircraft fleet.

Using these criteria, the FAA has determined that the proposed amendments to § 91.167 and § 91.169, if promulgated, will not have a significant economic impact on a substantial number of small entities. None of the proposed amendments will significantly affect air carrier costs.

International Trade Impact Statement

This proposed rule is not expected to impose a competitive disadvantage to either US air carriers doing business abroad or foreign air carriers doing business in the United States. This assessment is based on the fact that this proposed rule would not impose additional costs on either US or foreign air carriers. This proposal would have no effect on the sale of foreign aviation products or services in the United States, nor would it affect the sale of United States aviation products or services in foreign countries.

Unfunded Mandates Reform Act Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), enacted as Pub. L. 104-4 on March 22, 1995, requires

each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (adjusted annually for inflation) in any one year. Section 204(a) of the Act, 2 U.S.C. § 1534(a), requires the Federal agency to develop an effective process to permit timely input by elected officers (or their designees) of State, local, and tribal governments on a proposed "significant intergovernmental mandate." A "significant intergovernmental mandate" under the Act is any provision in a Federal agency regulation that would impose an enforceable duty upon State, local, and tribal governments, in the aggregate, of $100 million (adjusted annually for inflation) in any one year. Section 203 of the Act, 2 U.S.C. § 1533, which supplements section 204(a), provides that before establishing any regulatory requirements that might significantly or uniquely affect small governments, the agency shall have developed a plan that, among other things, provides for notice to potentially affected small governments, if any, and for a meaningful and timely opportunity to provide input in the development of regulatory proposals.

This rule does not contain any Federal intergovernmental or private sector mandate. Therefore, the requirements of

Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

Federalism Implications

The proposed regulations do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government. Thus, in accordance with Executive Order 12612, it is determined that this proposed regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Conclusion

For the reasons set forth under the heading "Regulatory Analysis," the FAA has determined that this proposed regulation: (1) is **[NOT?]** a significant rule under Executive Order 12866; and (2) is **[NOT?]** a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). Also, for the reasons stated under the headings "Trade Impact Statement" and "Regulatory Flexibility Determination," the FAA certifies that the proposed rule would **[NOT?]** have a significant economic impact on a substantial number of small entities. A copy of the full regulatory evaluation is filed in the docket and may

also be obtained by contacting the person listed under "**FOR FURTHER INFORMATION CONTACT.**"

List of Subjects

14 CFR Part 91

Aircraft, Airports, Aviation safety.

THE PROPOSED AMENDMENT

In consideration of the foregoing, the FAA proposes to amend part 91 of the Federal Aviation Regulations (14 CFR part 91) as follows:

PART 91 -- GENERAL OPERATING AND FLIGHT RULES

1. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. app. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, 2121 through 2125; Articles 12, 29, 31, and 32(a) of the Convention on International Civil Aviation (61 stat. 1180); 42 U.S.C. 4321 et seq.; E.O. 11514, 35 FR 4247, 3 CFR, 1966-1970 Comp., p. 902; 49 U.S.C. 106(g).

2. Section 91.167 is amended by revising paragraph (b) to read as follows:

§ 91.167 Fuel requirements for flight in IFR conditions.

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(b) Paragraph (a)(2) of this section does not apply if--

(1) Part 97 of this chapter prescribes a standard instrument approach procedure for the first airport of intended landing; and

(2) The weather reports or prevailing weather forecast or combination of them indicate--

(i) For airplanes, for at least 1 hour before and 1 hour after the estimated time of arrival, the ceiling will be at least 2,000 feet above the airport elevation; for helicopters, at the estimated time of arrival, the ceiling will be 1,000 feet above the airport elevation or 400 feet above the lowest approach minima, whichever is higher; and

(ii) For airplanes, for at least 1 hour before and 1 hour after the estimated time of arrival, the visibility will be at least 3 statute miles; for helicopters, at the estimated time of arrival, the visibility will be at least 2 statute miles.

3. Section 91.169 is amended by revising paragraphs (b) and (c) to read as follows:

§ 91.169 IFR flight plan: Information required.

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(b) Exceptions to applicability of paragraph (a)(2) of this section. Paragraph (a)(2) of this section does not apply if part 97 of this chapter prescribes a standard instrument approach procedure for the first airport of intended landing and the weather reports or prevailing weather forecast or combination of them indicate--

(1) For airplanes, for at least 1 hour before and 1 hour after the estimated time of arrival, the ceiling will be at least 2,000 feet above the airport elevation; for helicopters, at the estimated time of arrival, the ceiling will be at least 1,000 feet above the airport or heliport elevation or 400 feet above the lowest approach minima, whichever is higher; and

(2) For airplanes, for at least 1 hour before and 1 hour after the estimated time of arrival, the visibility will be at least 3 statute miles; for helicopters, at the estimated time of arrival, the visibility will be at least 2 statute miles.

(c) IFR alternate airport weather minimums. Unless otherwise authorized by the Administrator, no person may include an alternate airport in an IFR flight plan unless current prevailing weather forecasts indicate that at the estimated time of arrival at the alternate airport, the ceiling and visibility at that airport will be at or above the following alternate airport weather minimums:

(1) If an instrument approach procedure has been published in part 97 of this chapter for that airport, the

alternate airport minimums specified in that procedure, or, if none are so specified, the following minimums:

(i) Except as provided in paragraph (c)(2) of this section, precision approach procedure: For airplanes, Ceiling 600 feet and visibility 2 statute miles; for helicopters, Ceiling 400 feet and visibility 1 statute mile.

(ii) Except as provided in paragraph (c)(2) of this section, nonprecision approach procedure: For airplanes, Ceiling 800 feet and visibility 2 statute miles; for helicopters, Ceiling 600 feet and visibility 1 statute mile.

(2) If no instrument approach procedure has been published in part 97 of this chapter for that airport, the ceiling and visibility minimums are those allowing descent from the MEA, approach, and landing under basic VFR.

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